

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 159986

Thursday, April 20, 2017 10:22:59 AM

159986

Page 2

Item ID: 646.4001 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AS350 Cable Cutter System
Start Date: 5/15/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 5/23/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: (P.A.)SCHEDULED/S

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00				DAS 28 9-89			
130	Packaging							JUN 01 2017	
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 646.4001 Location: <i>Fg 102</i>								
140		0.00				DAS 21 9-89			
140	QC21- Final Inspection - Work Order Release								JUN 01 2017
QC	Memo	0.10							
Quality Control									

DAS
21
9-89 JUN 01 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Picklist Print

Thursday, April 20, 2017 10:22:57 AM

Page 1

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.23 NEW ISSUE DD VERF:JLM
IPP REV:B 15.01.08 AS PER DWG REV.B DD VERF:JLM IPP
REV:C 16.01.07 AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

600.0129		Purchased	No			100	f	72.0000	8	8			
600 0129 VHB TAPE 75935A651													

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK096
m135867

72
72

DAS
6
9-89
MAY 31 2017
DAS
27
9-89

600.0990		Purchased	No			100	Each	22.0000	1	1			
600 0990 Magnabond 6398 Part A Size 112 ml													

DAS
27
9-89

Location

Loc Qty

Loc Code

PKG
M136586
M136862
M137073
M134249

22
1
8
12
1

1/1/2017

02/01/2018
DAS
28
9-89

600.0991		Purchased	No			100	Each	22.0000	1	1			
600 0991 Magnabond 6398 Part B Size 112 ml													

DAS
27
9-89

Location

Loc Qty

Loc Code

PKG
m136586
m136862
m137073

22
2
8
12

JUN 01 2017

02/01/2018

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

600.1012 Purchased No 100 Each 13.0000 1 1

600 1012

Sealant PR1425B2 (#654 sem)

DAS
28
9-89

07/2017

Location

Loc Qty

Loc Code

cck017

13

m136838

1

m1370073

4

m137321

8

600.1013 Purchased No 100 Each 35.0000 5 5

600 1013

021200-3M TAPE PRIMER 94 PRIMER 24216

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK096

35

m136345

10

m137150

25

646.2910 Manufactured No 100 Each 9.0000 1 1

646 2910

Deflector

AS
18
99

Location

Loc Qty

Loc Code

CCK050

9

155356

9

646.3001 Manufactured No 100 Each 1.0000 1 1

646 3001

Lower Cable Cutter Assembly

AS
18
19

Location

Loc Qty

Loc Code

cck018

1

156876

1

10/7/2018

760179

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

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Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

646.3110
646 3110

Channel
DAS
28
9-89

Manufactured No

100 Each 3.0000 1 1

**

DAS
6
9-89

MAY 31 2017
DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

3

156797

3

646.3210
646 3210

Support
DAS
28
9-89

Manufactured No

100 Each 5.0000 1 1

**

DAS
6
9-89

MAY 31 2017
DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

5

155378

5

646.3301
646 3301

Upper Cutter Assembly
DAS
28
9-89

Manufactured No

100 Each 0.0000 1 1

**

DAS
6
9-89

MAY 31 2017
DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

5

646.3510
646 3510

Strut
DAS
28
9-89

Manufactured No

100 Each 8.0000 1 1

**

DAS
6
9-89

MAY 31 2017
DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

8

156767

8

646.3511
646 3511

Strut
DAS
28
9-89

Manufactured No

100 Each 2.0000 1 1

**

DAS
6
9-89

MAY 31 2017
DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

2

156231

2

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Picklist Print

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Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

646.3610

Manufactured No

100

Each

14.0000

1

1

646 3610

Filler

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

14

156880

14

646.3710

Manufactured No

100

Each

18.0000

1

1

646 3710

Doubler

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK006

18

152594

18

646.3711

Manufactured No

100

Each

7.0000

1

1

646 3711

Clip

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

7

156840

7

646.3712

Manufactured No

100

Each

9.0000

1

1

646 3712

Clip

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

9

156884

9

646.3713

Manufactured No

100

Each

9.0000

1

1

646 3713

Gusset

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

9

156776

9

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
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Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

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Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

646.3714
646 3714
Gusset

Manufactured No

100 Each

9.0000

1 1

DAS 6 9-89

MAY 31 2017

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

9

156761

9

646.3715
646 3715
Strut Doubler

Manufactured No

100 Each

6.0000

2 2

DAS 6 9-89

MAY 31 2017

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

6

158009

6

646.3716
646 3716
Gauge Bracket

Manufactured No

100 Each

8.0000

1 1

DAS 6 9-89

MAY 31 2017

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

8

156773

8

646.3717
646 3717
Doubler

Manufactured No

100 Each

4.0000

1 1

DAS 6 9-89

MAY 31 2017

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

4

155481

4

646.3718
646 3718
Custom Washer

Manufactured No

100 Each

5.0000

2 2

DAS 6 9-89

MAY 31 2017

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

5

155395

5

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DQA: _____ Date: _____



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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____	MRB (QSI042) Approval _____ _____ _____		
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

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Page 7

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

MAY 31 2017

646.3910

Manufactured No

100

Each

9.0000

4

4

646 3910

Shim

**

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK106

9

151458

1

156793

8

646.3911

Manufactured No

100

Each

8.0000

1

1

646 3911

Shim

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK106

8

126229

8

646.3912

Manufactured No

100

Each

7.0000

4

4

646 3912

Shim

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK106

7

156874

7

X3

646.3913

Manufactured No

100

Each

47.0000

1

1

646 3913

Shim

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK106

47

126060

47

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Shop Packet Print

Page 7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Page 8

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

646.9410

Manufactured No

100 Each

56.0000

1 1

DAS MAY 3 1 2017

646 9410

Shim

DAS
28
9-89

Location

Loc Qty

Loc Code

cck011

56

140671

56

647.0112

Manufactured No

100 Each

0.0000

2 2

DAS MAY 3 1 2017

647 0112

Strut Bracket

DAS
28
9-89

647.7703

Manufactured No

100 Each

0.0000

2 2

DAS MAY 3 1 2017

647 7703

Strut Assembly

DAS
28
9-89

650.9201

Manufactured No

100 Each

20.0000

2 2

DAS MAY 3 1 2017

650 9201

Eyelet Bracket Assembly

DAS
28
9-89

Location

Loc Qty

Loc Code

cck127

20

156828

20

AN3-11A

Purchased No

100 Each

300.0000

10 10

DAS MAY 3 1 2017

AN3-11A

Bolt

DAS
28
9-89

Location

Loc Qty

Loc Code

over003

100

m136192

100

ST349

200

153855

200

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

AN3-12A	Purchased	No	100	Each	236.0000	2	2	
AN3-12A						**		
Bolt								
								MAY 3 1 2017
								DAS 6 9-89
								DAS 27 9-89

DAS
28
9-89

Location	Loc Qty	Loc Code
over003	206	
153854	206	
ST349	30	
m135603	30	

AN3-13A	Purchased	No	100	Each	46.0000	1	1	
AN3-13A						**		
Bolt								
								MAY 3 1 2017
								DAS 6 9-89
								DAS 27 9-89

DAS
28
9-89

Location	Loc Qty	Loc Code
GA	16	
m127070	16	
ST349	30	
153845	29	
m136406	1	

AN316C4R	Purchased	No	100	Each	21.0000	2	2	
AN316C4R						**		
Nut, Jam								
								MAY 3 1 2017
								DAS 6 9-89
								DAS 27 9-89

DAS
28
9-89

Location	Loc Qty	Loc Code
ST331	21	
153850	21	

AN3-3A	Purchased	No	100	Each	68.0000	4	4	
AN3-3A						**		
Bolt								
								MAY 3 1 2017
								DAS 6 9-89
								DAS 27 9-89

DAS
28
9-89

Location	Loc Qty	Loc Code
ST350	68	
m137061	18	
m137320	50	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

AN3-4A Purchased No

100 Each 119.0000 10 10

AN3-4A

Bolt

**

DAS
6
9-89
MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST350

119

m136579

119

137428

AN3-5A Purchased No

100 Each 329.0000 2 2

AN3-5A

Bolt

**

DAS
6
9-89
MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

4

m136182

4

GA

250

m136986

250

2

ST350

75

m136182

75

AN3-6A Purchased No

100 Each 63.0000 2 2

AN3-6A

Bolt

**

DAS
6
9-89
MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST350

63

153844

63

137472

AN44-5A Purchased No

100 Each 17.0000 2 2

AN44-5A

Eyebolt

**

DAS
6
9-89
MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST339

17

m136866

5

m137075

12

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Page 11

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

AN4C7A
AN4C7A
BOLT

Purchased No

100 Each

32.0000

2 2

MAY 31 2017

**

DAS
28
9-89

Location

Loc Qty

Loc Code

ST345

32

m136295

32

AN665-34R
AN665-34R
Clevis

Purchased No

100 Each

10.0000

2 2

MAY 31 2017

**

DAS
28
9-89

Location

Loc Qty

Loc Code

ST330

10

153852

10

CCR264SS3-02
CCR264SS3-02
Cherry Rivet

Purchased No

100 Each

97.0000

36 36

MAY 31 2017

**

DAS
28
9-89

Location

Loc Qty

Loc Code

ST321

97

M136986

97

CR3213-5-3
CR3213-5-3
Cherry Rivet

Purchased No

100 Each

132.0000

14 14

MAY 31 2017

**

DAS
28
9-89

Location

Loc Qty

Loc Code

over003

100

m137320

100

ST319

32

m136851

32

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			OTHER : _____	

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS20426AD5-7 Purchased No

100 Each 1,412.000 2 2

MS20426AD5-7

RIVET

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK004

703

153848

703

ST311

709

M133922

709

MS20470AD5-5.5 Purchased No

100 Each 662.0000 8 8

MS20470AD5-5.5

Rivet

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

662

m134063

662

MS20470AD5-6 Purchased No

100 Each 552.0000 8 8

MS20470AD5-6

RIVET

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

552

124089

552

MS20470AD5-7 Purchased No

100 Each 353.0000 3 3

MS20470AD5-7

Rivet

**

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

353

123425

353

MS21042-08 MS21042L08 Purchased No

100 Each 0.0000 2 2

MS21042-08

USE MS21042L08

**

137391

DAS
6
9-89

MAY 31 2017

DAS
27
9-89

DAS
28
9-89

Thursday, April 20, 2017 10:22:58 AM

Shop Packet Print

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Page 13

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042-3 MS21042L3 Purchased No

100 Each 0.0000 2 2

MS21042L3

Nut **DAS 28 9-89**

MS21042L3 Purchased No

100 Each 2,166.000 61 61

MS21042L3

Nut **DAS 28 9-89**

Location

Loc Qty

Loc Code

FP001

100

m135945

100

GA

168

m134360

102

M136665

66

OVER007

1300

m134360

0

M136665

300

m137321

1000

ST303

598

m137073

98

m137166

500

MS21042L4 Purchased No

100 Each 2,429.000 2 2

MS21042L4

Nut **DAS 28 9-89**

Location

Loc Qty

Loc Code

FP001

10

m133363

10

GA

154

m135058

154

OVER007

1600

m137321

1600

ST303

665

m136986

165

m137166

500

Thursday, April 20, 2017 10:22:58 AM

Shop Packet Print

Page 13

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS21047-3 Purchased No

100 Each 102.0000 18 18

MS21047-3

Nut Plate

DAS
28
9-89

Location

Loc Qty

Loc Code

ST301

102

m136442

3

m136781

2

m137075

97

**

DAS
6
9-89

MAY 31 2017 DAS
27
9-89

MS24693-C278 Purchased No

100 Each 35.0000 5 5

MS24693-C278

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST287

35

m136554

35

**

DAS
6
9-89

MAY 31 2017 DAS
27
9-89

MS24694-S51 Purchased No

100 Each 297.0000 5 5

MS24694-S51

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST284

297

m135442

47

m136866

250

**

DAS
6
9-89

DAS
27
9-89

MS24694-S54 Purchased No

100 Each 152.0000 2 2

MS24694-S54

SCREW

DAS
28
9-89

Location

Loc Qty

Loc Code

ST284

152

153846

150

m135948

2

**

DAS
6
9-89

MAY 31 2017 DAS
27
9-89

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS24694-S55

Purchased

No

100

Each

235.0000

3

3

MS24694-S55

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST283

235

153847

235

MS27039-08-13

Purchased

No

100

Each

310.0000

2

2

MS27039-08-13

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST278

310

153849

310

MS27039-1-10

Purchased

No

100

Each

299.0000

2

2

MS27039-1-10

SCREW

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

15

m129541

15

ST280

284

m137164

284

MS27039-1-12

Purchased

No

100

Each

84.0000

6

6

MS27039-1-12

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

84

m136537

34

m137320

50

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☒ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : _____									

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

DAS
6
9-89

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-16

Purchased

No

100

Each

153.0000

24

24

MS27039-1-16

**

MAY 31 2017

Screw

Location

Loc Qty

Loc Code

over006

50

m137061

50

ST280

103

m136851

3

m137320

100

DAS
28
9-89

MS27039-1-19

Purchased

No

100

Each

167.0000

22

22

MS27039-1-19

**

MAY 31 2017

Screw

Location

Loc Qty

Loc Code

GA

80

m134134

80

ST280

87

m137075

87

DAS
28
9-89

MS27039-1-20

Purchased

No

100

Each

77.0000

2

2

MS27039-1-20

**

MAY 31 2017

Screw

Location

Loc Qty

Loc Code

ST280

77

m136554

77

DAS
28
9-89

MS27039-1-21

Purchased

No

100

Each

147.0000

4

4

MS27039-1-21

**

MAY 31 2017

Screw

Location

Loc Qty

Loc Code

ST280

147

m127904

147

DAS
28
9-89

DAS
27
9-89

DAS
27
9-89

DAS
27
9-89

DAS
27
9-89

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : _____			

Picklist Print

Thursday, April 20, 2017 10:22:58 AM

Work Order ID: 159986

159986

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 5/15/2017

Required Date: 5/23/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0332P

Purchased

No

100

Each

1,410.000

144

144

NAS1149F0332P

Washer

**

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

275

m133709

275

ST262

1135

m136835

8

m137075

1127

DAS
6
9-89

MAY 31 2017

NAS1149F0363P

Purchased

No

100

Each

72.0000

2

2

NAS1149F0363P

WASHER

**

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST262

72

124555

72

DAS
6
9-89

MAY 31 2017

NAS1149F0432P

Purchased

No

100

Each

537.0000

4

4

NAS1149F0432P

WASHER

**

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST262

537

M136442

537

DAS
6
9-89

MAY 31 2017

NAS1149FN832P

Purchased

No

100

Each

622.0000

4

4

NAS1149FN832P

Washer

**

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

494

M135058

232

M136182

40

M136866

222

ST263

128

M136866

128

DAS
6
9-89

MAY 31 2017

DQA: _____ Date: _____

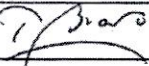
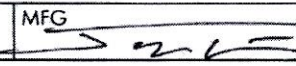
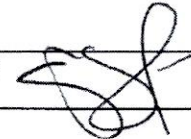


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

 APICAL INDUSTRIES, INC. dba DART AEROSPACE	ENGINEERING CHANGE NOTICE NO. 05304				SHEET 1 OF 1	
	DWG NO. 646.4000	REV: C	PREPARED BY J. BECKER	DATE: 02/04/16	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: AS350 CABLE CUTTERS KIT					
APPROVED BY: ENGR. 		MFG 	QC 	EFF. NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED F/N 12.				ECR: N/A
SHOP COPY RETURN TO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER NO. <u>159986</u> MLS 1704-20						ACTION ITEM: 1. N/A
<u>SHEET 1, BOM IS:</u>						
12	R	601.1624	8	16	LOCKNUT	MS21042L3
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL
			QTY			
DOCUMENTS EFFECTED:					CHANGE CATEGORY	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR	
					DER REVIEW REQUIRED	
					☐ YES ☒ NO	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES:

1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2 INSTALL F/N 14 WITH F/N 52 & 53.

3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMMASTER-CARR P/N 75935A651.

4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(S)

05304

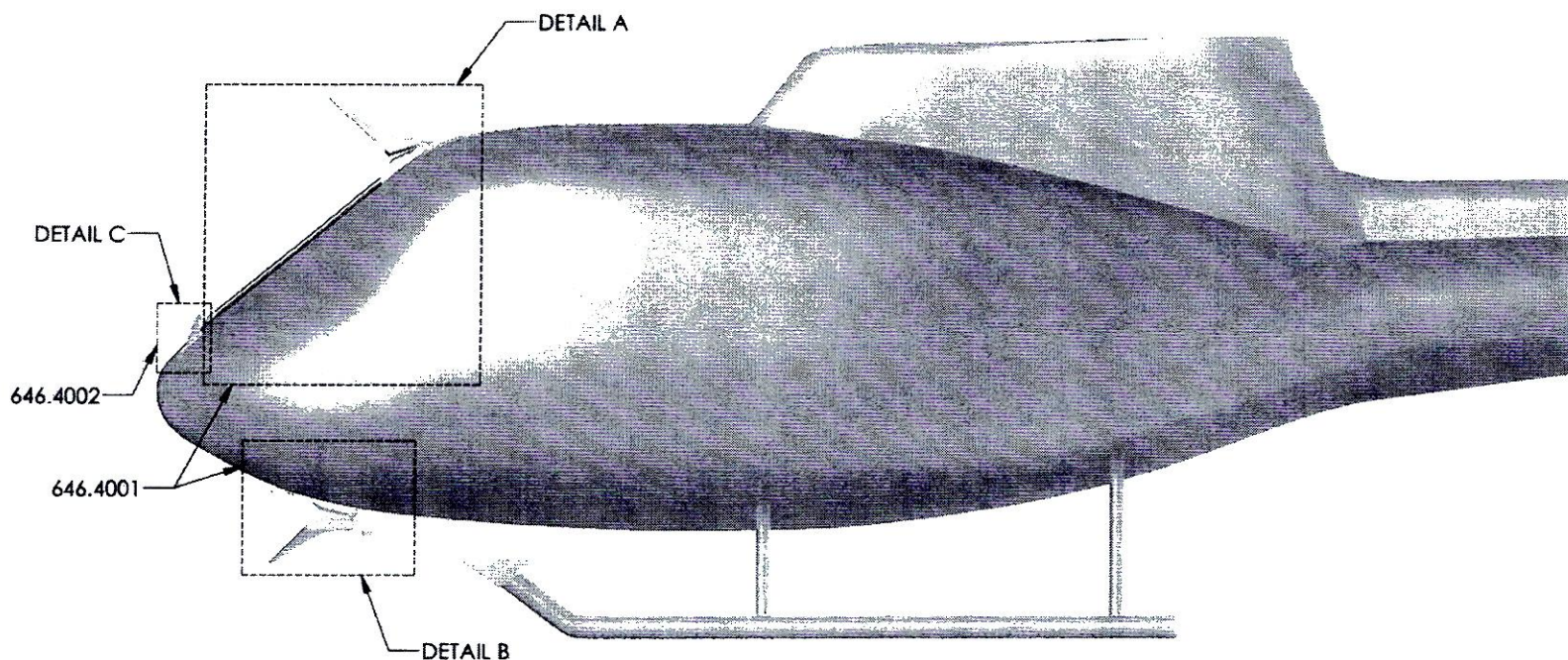
5	5	5	78	601.3875	SCREW	MS24694554				
1	1	1	77	646.9410	SHIM					
	4	4	76	601.2764	WASHER	NAS1149P030P				
	2	2	75	601.2973	LOCKNUT	MS27042-08				
	2	2	74	601.2988	SCREW	MS27039-0815				
	2	2	73	601.2943	LOCKNUT	MS27042-3				
	2	2	72	601.3128	NUT	ANS114CAR				
	2	2	71	601.3209	LOCKNUT	MS27042-4				
	4	4	70	601.2638	WASHER	NAS1149P0432P				
	2	2	69	601.2669	BOLT	ANAC7A				
	2	2	68	601.3119	CLEVIS	AN465-34R				
	2	2	67	601.3121	EYE BOLT	AN444-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
	REF	REF	65	647.5701	GPS MOUNT KIT					
		2	64	601.3151	WASHER	NAS1149P03063P				
		2	63	601.2911	SCREW	MS24694553				
	24	24	62	601.2637	SCREW	MS27039-1-16				
2	2	2	61	601.2763	BOLT	ANS-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PE 1400 CLASS B				
	1	1	53	600.0991	MAGNABOND 6378 PART B					
	1	1	52	600.0990	MAGNABOND 6378 PART A					
6	10	10	51	601.2826	BOLT	ANS-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS27039-1-16				
	2	2	48	601.1365	SCREW	MS27039-1-10				
	2	2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	2	44	601.1948	SCREW	MS27039-1-19				
	2	2	43	601.1952	SCREW	MS27039-1-20				
	4	4	42	601.1956	SCREW	MS27039-1-21				
4006	4003	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 02191, 0231, 02719 & 02745	02/08/2018	P. BRAYO
B	INCORPORATED ECN 0204, 0207 & 04231	11/04/2014	P. BRAYO
C	INCORPORATED ECN 0206	08/09/2013	P. BRAYO

		2	2	41	601.2829	SCREW	MS24694554			
		2	2	40	601.2831	RIVET	MS20470ADS-7			
		1	1	39	646.3716	GAUGE BRACKET				
		6	6	38	601.1953	SCREW	MS27039-1-12			
	2	2	2	37	646.3715	STRUT DOUBLER				
		2	2	36	601.2824	BOLT	ANS-5A			
12	36		36	35	601.2277	RIVET	DC604659-02			
6	18		18	34	600.0795	NUTPLATE	MS27047-3			
3	3		3	33	601.2565	RIVET	MS20470ADS-7			
1	1		1	32	646.3813	STRUT BRACKET				
4	4		4	31	601.2822	BOLT	ANS-3A			
2	2		2	30	646.3812	GUSSET BRACKET				
8	8		8	29	601.2564	RIVET	MS20470ADS-6			
1	1		1	28	646.3714	GUSSET				
	1	1	1	27	646.3610	FILLER				
	3	3	3	26	601.2830	SCREW	MS24694555			
	2	2	2	25	601.2825	BOLT	ANS-6A			
	1	1	1	24	646.3811	RADIUS BLOCK				
	1	1	1	23	646.3712	CLIP				
	1	1	1	22	646.3711	CLIP				
8	8		8	21	601.2832	RIVET	MS20470ADS-5			
14	14		14	20	601.2020	RIVET	CR321-3-3			
4	6	4	6	19	601.2823	BOLT	ANS-4A			
	1	1	1	18	601.2827	BOLT	ANS-13A			
	5	5	5	17	601.2912	SCREW	MS24694551			
1	1		1	16	646.3713	GUSSET				
1	1		1	15	646.3210	SUPPORT				
	1	1	1	14	646.3710	DOUBLER				
	1	1	1	13	646.3110	CHANNEL				
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS27042-3	
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149P030P	
				10	646.3410	LH WIPER DEFLECTOR				
			1	9	646.3411	RH WIPER DEFLECTOR				
		2	2	8	647.7703	STRUT ASSY				
		2	2	7	647.0112	STRUT BRACKET				
	1	1	1	6	646.3511	STRUT				
	1	1	1	5	646.3510	STRUT				
2	2		2	4	646.3810	BRACKET				
		1	1	3	646.2910	DEFLECTOR				
	1	1	1	2	646.3001	LOWER CUTTER ASSY				
		1	1	1	646.3301	UPPER CUTTER ASSY				
X					646.4006	LOWER CUTTER FIXED PROVISIONS				
	X				646.4005	LOWER CUTTER REMOVABLE PROVISIONS				
		X			646.4004	FIXED PROVISIONS KIT				
			X		646.4003	CABLE CUTTERS FT W/OUT FIXED PROVISIONS				
				X	646.4002	AS350 WIPER DEFLECTOR KIT				
				X	646.4001	AS350 CABLE CUTTERS KIT				
4006	4005	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

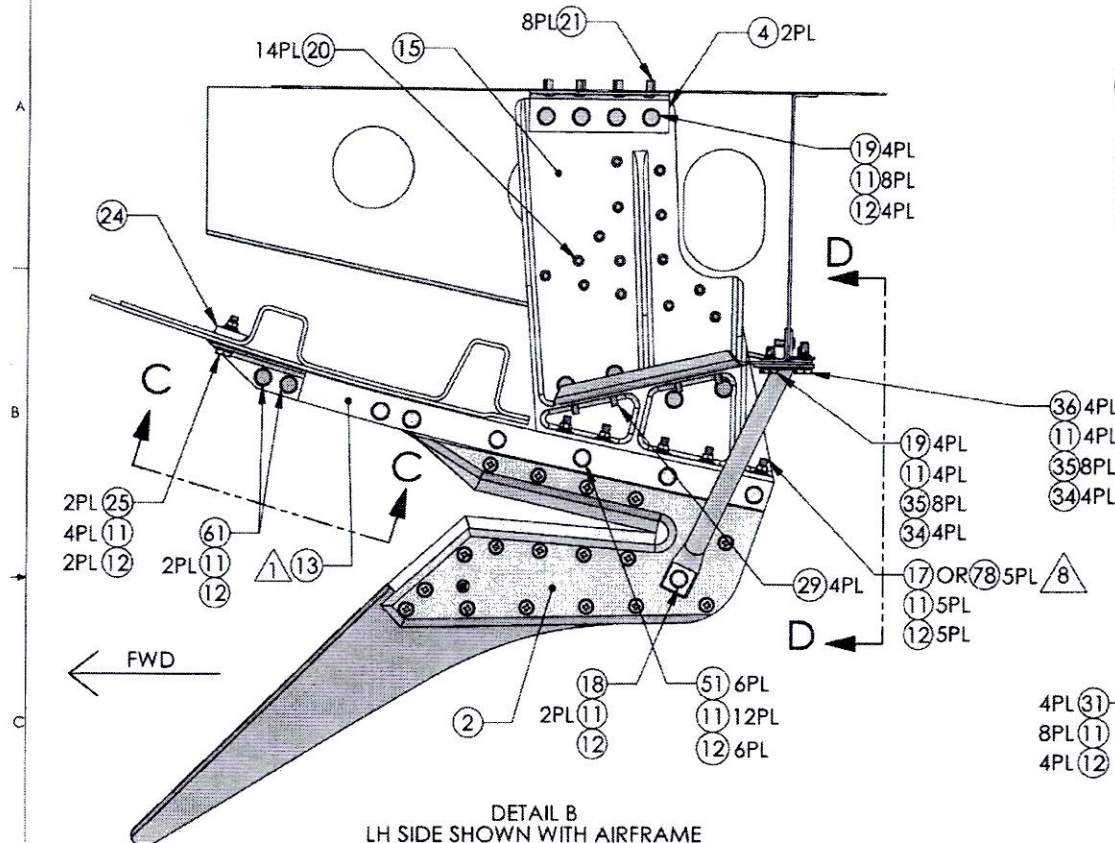
QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE: 08-27-08 DESIGNED BY: P. BRAYO DRAWING APPROVAL: P. BRAYO CHECKED BY: P. BRAYO UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES 1 PLACE DECIMALS & 0.001 SPACES (ROUND UP) ANGLES: 3°	
DART AEROSPACE 3000 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300		AS350 CABLE CUTTERS KIT 646.4000 SCALE: NONE 1 SHEET OF 5	

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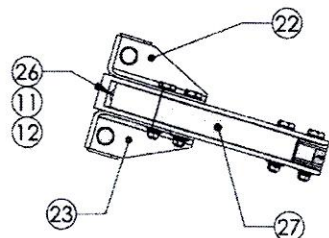


ORIGINAL DATE 08-21-09	 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300 APICAL INDUSTRIES INC. DBA DART AEROSPACE		
DRAWN BY J. HUR			
CHECKED BY P. BRADY			
DRAWING APPROVAL 08-22-09			
CONTRACT NO.	AS350 CABLE CUTTERS KIT		
SUP B	CAGE CODE 07M26	DWG. NO. 646.4000	REV C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± 0.10 3 PLACE DECIMALS ± 0.05 ANGLES ± 1°		SCALE: NONE SHEET 2 OF 5	

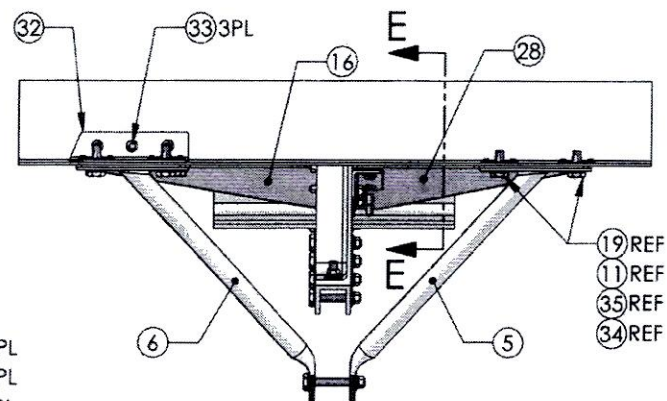
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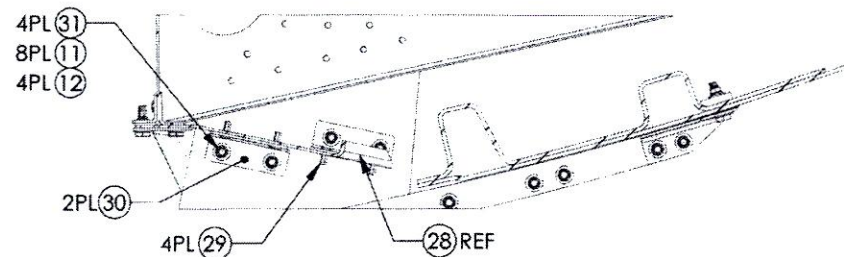
DETAIL B
LH SIDE SHOWN WITH AIRFRAME



SECTION C-C



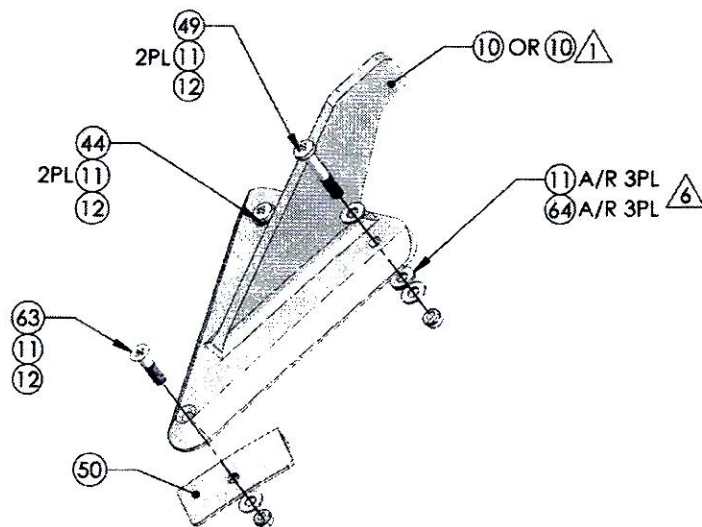
SECTION D-D
CUTTER HIDDEN FOR CLARITY



SECTION E-E

ORIGINAL DATE 2007-06-15		DART AEROSPACE 3030 ENTERPRISE CT., SUITE A, VISTA, CA 92081 (760) 724-5300	
DRAWN BY S. HUPP	CHECKED BY P. BRAY		
DRAWING APPROVAL P. BRAY	DATE 08-20-08		
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
SHEET B	CAGE CODE 07M76	DWG. NO. 646.4000	REV C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±0.01 3 PLACE DECIMALS ±0.005 ANGLES ±1°		SCALE NONE	SHEET 4 OF 5

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WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE 2/20/04 10:00 AM		 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWN BY S. HUIE			
DRAWING APPROVAL P. BOVINO		AS350 CABLE CUTTERS KIT	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SER. 07M26 SCALE NONE	DWG. NO. 646.4000 REV. C SHEET 5 OF 5

Work Order ID 159986

159986

Page 1

Thursday, April 20, 2017 10:22:59 AM

Item ID: 646.4001 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: AS350 Cable Cutter System
 Start Date: 5/15/2017 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 5/23/2017 Req'd Qty: 1.00 *1* Customer:
 Reference: (P.A.)SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.4000	C1								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP 646.4001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.03							
Quality Control									

CB

17-06-01

United States Of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate

Number SR02180LA

This Certificate issued to Apical Industries, Inc. dba Dart Aerospace
3030 Enterprise Court, Suite A
Vista, CA 92081

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified herein meets the airworthiness requirements of Part 27 of the Federal Aviation Regulations.*
*Certification basis is set forth in Type Certificate Data Sheet H9EU.

Original Product Type Certificate Number: H9EU

Make: Eurocopter France

Model: AS350 C, D, D1, B, B1, B2, BA, B3

Description of Type Design Change: Installation of a Cable Cutter Kit in accordance with FAA approved Apical Master Document List, MD350-61, Revision A, dated November 25, 2008, or later FAA approved revision.

Limitations and Conditions: The installation should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of the aircraft. The approval of this modification applies to the above noted aircraft model series only. This approval requires the inspections and overhaul schedules to be performed as mandated by Apical Industries, Inc.'s Instructions for Continued Airworthiness, ICA350-61, Revision N/C, dated November 20, 2008, or later FAA accepted revision. A copy of this STC must be included in the permanent records of the modified aircraft. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: May 21, 2008

Date issued: August 7, 2014

Date of issuance: December 16, 2008

Date amended:

By direction of the Administrator



Haifa Haj-Eid
(Signature)

Haifa Haj-Eid
Supervisor, Technical and Administrative
Support Staff
Los Angeles Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

REFERENCE ONLY

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NOTES:

- AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

- 2 INSTALL F/N 14 WITH F/N 52 & 53.

- 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 75935A651.

- 4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

-  REUSE FASTENERS FROM F/N 1.

-  USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

- 7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

- 8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

- 9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

	5		5	78	601.3875	SCREW	MS27039-1-16			
	1	1	1	77	646.9410	SHIM	MS27039-1-16			
		4	4	76	601.2764	WASHER	MS27039-1-16			
		2	2	75	601.2973	LOCKNUT	MS27039-1-16			
		2	2	74	601.2988	SCREW	MS27039-1-16			
		2	2	73	601.2943	LOCKNUT	MS27039-1-16			
		2	2	72	601.3128	NUT	MS27039-1-16			
		2	2	71	601.3209	LOCKNUT	MS27039-1-16			
		4	4	70	601.2638	WASHER	MS27039-1-16			
		2	2	69	601.2669	BOLT	MS27039-1-16			
		2	2	68	601.3119	CLAVIS	MS27039-1-16			
		2	2	67	601.3121	EYE BOLT	MS27039-1-16			
		2	2	66	650.9201	EYE BRACKET ASSY	MS27039-1-16			
	REF	REF	REF	65	647.5701	GPS MOUNT KIT	MS27039-1-16			
			2	64	601.3151	WASHER	MS27039-1-16			
				63	601.2911	SCREW	MS27039-1-16			
		24	24	62	601.2637	SCREW	MS27039-1-16			
	2	2	2	61	601.2763	BOLT	MS27039-1-16			
		1	1	60	646.3913	SHIM	MS27039-1-16			
		4	4	59	646.3912	SHIM	MS27039-1-16			
		1	1	58	646.3911	SHIM	MS27039-1-16			
		4	4	57	646.3910	SHIM	MS27039-1-16			
		5	5	56	600.1013	PRIMER	MS27039-1-16			
	8 FT	8 FT	8 FT	55	600.0129	VHB TAPE	MS27039-1-16			
		1	1	54	600.1012	SEALANT	MS27039-1-16			
		1	1	53	600.0991	MAGNABOND 6398 PART B	MS27039-1-16			
		1	1	52	600.0990	MAGNABOND 6398 PART A	MS27039-1-16			
	6	10	10	51	601.2826	BOLT	MS27039-1-16			
				50	646.3814	WIPER BRACKET	MS27039-1-16			
			2	49	601.2910	SCREW	MS27039-1-16			
	2		2	48	601.1365	SCREW	MS27039-1-16			
	2		2	47	646.3719	DOUBLER	MS27039-1-16			
		2	2	46	646.3718	CUSTOM WASHER	MS27039-1-16			
	1		1	45	646.3717	DOUBLER	MS27039-1-16			
		22	22	44	601.1948	SCREW	MS27039-1-16			
		4	4	43	601.1952	SCREW	MS27039-1-16			
		4	4	42	601.1956	SCREW	MS27039-1-16			
4006	4005	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

UNINCORPORATED ECN(s)

0.5304

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 02799, 02851, 02779 & 02765	02/08/2010	P. BRAYO
B	INCORPORATED ECN 03046, 03079 & 04731	11/04/2014	P. BRAYO
C	INCORPORATED ECN 03058	09/08/2015	P. BRAYO

			2		2	41	601.2829	SCREW	MS2469-454
			2		2	40	601.2831	RIVET	MS20425AD5-7
			1		1	39	646.3716	GAUGE BRACKET	
			6		6	38	601.1953	SCREW	MS27039-1-12
		2			2	37	646.3715	STRUT DOUBLER	
	2		2		2	36	601.2824	BOLT	AN3-5A
12	36				36	35	601.2277	RIVET	CC84H5-302
	18				18	34	600.0795	NUTPLATE	MS27047-3
3	3				3	33	601.2565	RIVET	MS20470AD5-7
1	1				1	32	646.3813	STRUT BRACKET	
4	4				4	31	601.2822	BOLT	AN3-5A
2	2				2	30	646.3812	GUSSET BRACKET	
8	8				8	29	601.2564	RIVET	MS20470AD5-6
1	1				1	28	646.3714	GUSSET	
	1	1			1	27	646.3610	FILLER	
	3	3			3	26	601.2830	SCREW	MS2464555
	2	2			2	25	601.2825	BOLT	AN3-6A
	1	1			1	24	646.3811	RADIUS BLOCK	
	1	1	1		1	23	646.3712	CLIP	
	1	1	1		1	22	646.3711	CLIP	
8	8				8	21	601.2832	RIVET	MS20470AD5-6.5
14	14				14	20	601.2020	RIVET	CR3213-5-3
4	6	4	6		10	19	601.2823	BOLT	AN3-6A
	1	1	1		1	18	601.2827	BOLT	AN3-13A
	5	5			5	17	601.2912	SCREW	MS2469-4551
1	1				1	16	646.3713	GUSSET	
1	1				1	15	646.3210	SUPPORT	
	1	1			1	14	646.3710	DOUBLER	
	1	1			1	13	646.3110	CHANNEL	
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS12042.5
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149FDZBP
				1		10	646.3410	LH WIPER DEFLECTOR	
						9	646.3411	RH WIPER DEFLECTOR	
		2			2	8	647.7703	STRUT ASSY	
		2			2	7	647.0112	STRUT BRACKET	
	1	1			1	6	646.3511	STRUT	
	1	1			1	5	646.3510	STRUT	
2	2				2	4	646.3810	BRACKET	
		1			1	3	646.2910	DEFLECTOR	
	1	1			1	2	646.3001	LOWER CUTTER ASSY	
		1			1	1	646.3301	UPPER CUTTER ASSY	
X							646.4006	LOWER CUTTER FIXED PROVISIONS	
	X						646.4005	LOWER CUTTER REMOVABLE PROVISIONS	
		X					646.4004	FIXED PROVISIONS KIT	
			X				646.4003	CABLE CUTTERS KIT WITHOUT FIXED PROVISIONS	
				X			646.4002	ASS350 WIPER DEFLECTOR KIT	
					X		646.4001	ASS350 CABLE CUTTERS KIT	
400A	4003	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL SPEC.

[illegible]